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ABSTRACT

This report documents the progress made by the Faxon Montessori Magnet School in Kansas City, Missouri, during the three years of its implementation of the Montessori philosophy. During the 1990-91 school year, the school served children from three years of age through third grade. School enrollment information was analyzed and data were obtained from classroom observation; from parent, teacher, and student questionnaires; and from achievement tests. Analysis of enrollment information revealed that: (1) enrollment was at 93 percent of capacity; (2) enrollments varied by grade level; and (3) minority students comprised 61 percent of the student population. Classroom observation indicated that students were engaged in independent learning activities and activities that enhanced motor skills. Teacher-initiated management was minimal. Results from the questionnaires indicated that program participants were satisfied with most aspects of the program. However, teachers were dissatisfied with the amount of administrative support they received. Achievement scores of kindergarten, first-grade, and second-grade students on the reading, math, and language subtests of the Iowa Tests of Basic Skills were above district and national norms. Third graders scored above district, and below national, norms on the Missouri Mastery and Achievement Tests. Thirteen data tables and seven figures are included, and an appendix presents a description of the goals and activities of the Faxon Montessori extended day program. (BC)

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Summative Evaluation of the Faxon Montessori Magnet Elementary School

1990-1991

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August 1991

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Summative Evaluation of the Faxon Montessori Magnet Elementary School

1990-1991

William P. Moore
Program Evaluator

August 1991

Evaluation Office
Desegregation Planning Department
The School District of Kansas City, Missouri

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Executive Summary

The Faxon Montessori Magnet School has completed its third year of operation as part of the Kansas City, Missouri, School District's *Long-Range Magnet School Plan*. The school is currently located at the Switzer Annex while construction of a new building is underway. The ground breaking began in May 1990 at Linwood Boulevard and the Paseo. Faxon added third grade students during the current year. An additional grade level will be added in succeeding years until the program serves students from three years old to fifth grade.

This summative evaluation report documents the progress made by the school during the three years of implementing the Montessori theme. The evaluation is based on the goals and objectives established by the *New Faxon Montessori Site Plan* and the *Long-Range Magnet School Plan*.

The results of this evaluation indicate that Faxon has a school enrollment meeting 93% of program capacity. Further, grade level enrollments are quite variable with three of six grades exceeding program capacity. Faxon's racial composition stands at 61% minority/39% non-minority. Faxon is expected to be at 60%/40%. Grade three enrollment was substantially different from the racial composition goal with 71% minority/29% non-minority enrollment. Of concern was the impact of enrollment exceeding program capacities. Consequently, Faxon exceeded court-ordered class size limits in three classrooms during the current year. Program implementation has been successful throughout the three years of implementation. However, the following problems have been identified by program participants: resource teacher vacancies and Montessori in-service relevance to teachers.

Observational data have consistently demonstrated a successful implementation of the Montessori method and educational philosophy. Students are actively engaged in independent learning activities; teacher initiated mangagement, consulation, and total group instruction were minimal;and students were engaged in learning opportunities which enhanced eye-hand and motor skills coordination.

Perception data indicated that program participants are satisfied with most aspects of the Montessori program. Alternately, teachers have indicated dissatisfaction with the lack of resource support.

Achievement scores for kindergarten, grade one, and grade two students are well above district and national norms in reading, math, and language Iowa Tests of Basic Skills subtests.

norms in reading, language, and math. Minority students scored at or above national norms in reading, language, and math at the kindergarten, first, and second grades. Non-minority students in kindergarten through grade two have consistently scored above district and national norms in reading, language and math during the three years of implementation.

MMAT scores for third grade students indicated that Faxon students scored above district norms and slightly below national norms in reading/language arts, math, science, and social studies.

Classroom observations, interviews, questionnaires, and achievement results suggest that the Montessori program has been implemented as detailed in the site plan and Long-Range Plan. Perceptions of parents and teachers continue to be positive and reflect a strong degree of satisfaction in most areas of program implementation. Considering the program's wide appeal; the achievement of racial composition goals; and the above norm achievement performance of students, the Montessori magnet program appears, after three years, to be forgeing a successful educational and desegregative experience for students. Several recommendations were offered as a result of this end-of-year evaluation.

SUMMATIVE EVALUATION OF THE

FAXON MONTESSORI MAGNET ELEMENTARY SCHOOL

August 1991

Introduction

This formative evaluation documents the progress made by the Faxon Montessori Magnet School during its three years of implementing the Montessori magnet theme. Faxon began operations during the 1988-1989 academic year as an integral part of the district's magnet school plan. During the third year of implementation, Faxon was located at the site of the Switzer Annex. The newly constructed, permanent site is scheduled for occupation prior to school start-up in the 1991-1992 school year.

Faxon operates in accordance with the *Long-Range Magnet School Plan* (Hale & Levine, 1986), hereinafter called the Long-Range Plan, and the *New Faxon Montessori Site Plan* (New Faxon Montessori Site Task Force, 1988) established by a magnet task force convened at the school. In keeping with the Long-Range Plan, the site plan was developed during the 1987-1988 planning year and established the structure, objectives and goals for the Montessori program.

The primary focus of this evaluation was to assess the success of implementation efforts during the three years of program implementation and determine whether court-ordered enrollment and racial composition goals were met. In order to accommodate this focus, information was collected from district administrators, school leadership, teachers, and students. Classroom and building observational data provide further evidence of program implementation progress. Enrollment and racial composition data have been gathered from the district's research office.

This report provides a brief description of the Montessori magnet program and the design of the evaluation study, as well as a detailed presentation of the evaluation results. Conclusions and recommendations based upon obtained results are offered with an eye toward improved program functioning.

Program Description

The mission statement from the *New Faxon Montessori Site Plan* suggests the focus of curricular and instructional goals: "The mission of the school is to prepare the learner for life. The school will seek to create a desegregated educational and social environment in which the child will be encouraged to be a self-motivated learner, developing such qualities as order, concentration, coordination, and independence." (New Faxon Montessori Task Force, 1988, p. 2).

Following the teachings and method established by Dr. Maria Montessori and the standards set by the International Montessori Association, Faxon is one of two district schools with a Montessori program. The district established a second Montessori school which was opened in the fall of 1990. The Montessori program at Faxon reflects the philosophy of education advanced by Dr. Montessori: "The goal of early childhood education should not be to fill the child with facts from a pre-selected course of studies, but rather to cultivate his own natural desire to learn." (Denver Public Schools, 1988). According to the Montessori method, this is accomplished in two ways: first, by allowing each child to experience the excitement of learning by his own choice rather than by being forced; and second, by helping him to perfect all his natural tools for learning, so that his ability will be at a maximum in future learning settings.

The Faxon program facilitates independent, continuous-progress learning. It is a goal of this program to provide an enriched learning environment which challenges students to develop higher-order thinking skills through self-motivated learning. Additionally, Faxon provides mixed-age classroom environments based on the Montessori theory of child development. Specifically designed Montessori materials are utilized to implement the curriculum and facilitate independent learning. A unique focus of the learning environment at Faxon is the provision, as specified in the site plan, for exposure to, and respect for, differing ethnic backgrounds. Given the specialized instructional environment of the Montessori program, all teachers must have special Montessori training and certification.

During the current year, there were eleven Montessori classrooms at Faxon (five composed of three-year olds, four-year olds, and kindergartners (also referred to as Children's House); one composed of kindergartners and first graders; two composed of first, second, and third graders; two composed of first and second graders; and one with three- and four-year olds (Children's House). According to the Faxon Site Plan, an additional grade level will be added to the existing structure until the magnet program serves pre-kindergarten through fifth grade.

During the first year of implementation (1988-1989), Faxon served pre-kindergarten through first grade. In the second year, second grade has been added. During this third year, third grade was added. It is planned to have grade five integrated for the 1992-1993 school year.

Evaluation Design

The information provided in this evaluation report examines program implementation success, enrollment and racial composition goals, pupil-teacher ratios, perceptions of program participants, and achievement results for three years of implementation.

Evaluation Questions and Methodology

Guiding the evaluation of Faxon Montessori was the Long-Range Plan and the New Faxon Site Plan. This summative evaluation was designed to address the following questions:

1. Has the school met the established enrollment goals?
2. Was the program implemented as detailed in the Long-Range Plan and in the site plan of the school?
3. What are parent, teacher, student, and school leadership perceptions and attitudes toward the program?
4. What are the levels of student achievement in the school?

Data collection consisted of gathering enrollment and racial composition data from reports prepared by the district's research office, collecting class size data, administering questionnaires which provide perceptual data, and accumulating observational data from classrooms. Enrollment and racial composition data are reported for three years of implementation. Program implementation was examined utilizing data from classroom observations, on-site visitations, interviews with school leadership, administrations of teacher, student and parent questionnaires, and results from the Iowa Tests of Basic Skills (ITBS) and Missouri Mastery and Achievement Tests (MMAT) spring administration.

Results

Enrollment and Desegregation

Enrollment and racial composition data have been extracted from the official student membership reports prepared by the research office of the school district. These values are based on enrollment figures reported on the fourth Wednesday in September. Minority and

non-minority figures are presented by grade. Additionally, compliance with court-ordered class size limits was gathered through the research office and updated with reports from school personnel in the fall.

According to figures released in the *September 26, 1990, Student Membership* (Research Office, 1990) report and 1990-1991 program capacities utilized by the district's Admissions Office to place students into available magnet openings, Faxon had a total school enrollment 93% of capacity (see Table 1). Faxon enrolled 223 students. The program capacity was set at 240 students. Furthermore, half of the grades had enrollments exceeding the program capacity for the grade. Two grade levels were quite discrepant. First grade enrollment was 33% higher than the capacity for that grade. Third grade enrollment was 65% below capacity.

The achievement of court-ordered desegregation in the Kansas City, Missouri, School District is a central feature of the magnet school plan and the New Faxon Site Plan. According to the Long-Range Plan, "the purpose of magnet schools for KCMSD is to increase desegregation in as many of its classrooms as possible" (Hale & Levine, 1986, p. 3). At Faxon, each

Table 1
Program Capacity and Enrollment
Faxon Montessori Program
1990-1991

Grade	Program[1] Capacity	Actual[2]	Difference	Percent of Capacity
Pre-3	40	38	-2	95%
Pre-4	40	42	+ 2	105%
Kindergarten	40	47	+ 7	118%
First	40	53	+ 13	133%
Second	40	29	-11	73%
Third	40	14	-26	35%
Total	240	223	- 17	93%

[1] Program capacity utilized by the Admission's Office when placing students in magnet programs.

[2] From *September 26, 1990 Student Membership* (Research Office, 1990).

incoming grade is expected to reflect a 60% minority/40% non-minority racial composition. Grades already established are expected to maintain the 60-40 balance. The district has recognized a range of acceptable accomplishment for racial composition. For Faxon, the minority enrollment range for three- and four-year olds, kindergarten, and third grade was 50%-60%. At the first grade the range was 50%-61.9%. Second grade minority enrollment was expected to be within 50%-73%. An examination of Table 2 indicated that Faxon's total racial composition is 61% minority/39% non-minority. This balance has not changed substantially since the first year of implementation. Faxon has achieved grade level racial desegregation at the four-year old, kindergarten, first, and second grades, given the acceptable ranges discussed previously. Only at the three-year old and third grade levels is the racial composition goal not achieved.

Pupil-to-teacher ratio. The Long-Range Plan limits the size of Montessori classes to no greater than 20 students: "Because the Montessori approach depends on providing each student with individually-appropriate learning environments for self-directed, continuous progress learning, maximum class size should be twenty students" (Hale & Levine, 1986; p. 114). As of September, figures provided by the district's research office indicated that Faxon class sizes averaged 19.8 students per class with three classrooms reporting enrollment greater than twenty students (one classroom of first and second graders; one kindergarten classroom; and one pre-kindergarten (i.e., Children's House) classroom).

Implementation

The Faxon Montessori Magnet School has demonstrated marked progress in its implementation of the magnet theme, as specified in the Long-Range Plan and the New Faxon Site Plan. During the first year of implementation, space problems at the temporary school site restricted the location of ancillary staff (i.e., music, physical education, art). The acquisition of the former library at the Switzer Annex reduced serious space problems. Space is not anticipated to be problematic in the new facility.

Staffing, support, and resources. As of the end of the current implementation year, two resource positions remained vacant for a third year. According to school leadership, two highly qualified Montessori educators have been recommended for employment for the upcoming year. During the current year, all classroom teachers were certified to teach in the Montessori setting. Overall, school leadership reports that the Montessori staff has made excellent progress in their efforts to implement the magnet theme. Leadership notes that

Table 2
Minority and Non-Minority Enrollment
Faxon Montessori
1988, 1989, & 1990

	Year One - September 1988				Year Two-September 1989				Year Three-September 1990			
	Minority		Non-Minority		Minority		Non-Minority		Minority		Non-Minority	
Grade	N	% of Total	N	% of Total	N	% of Total	N	% of Total	N	% of Total	N	% of Total
3 Yr. Olds	32	59%	22	41%	12	55%	10	45%	25	66%	13	34%
4 Yr. Olds	37	64%	21	36%	35	60%	23	40%	24	57%	18	43%
Kindergarten	22	58%	16	42%	31	61%	20	39%	28	60%	19	40%
Grade 1	13	65%	7	35%	23	64%	13	36%	32	60%	21	40%
Grade 2[1]	---	---	---	---	12	75%	4	25%	16	55%	13	45%
Grade 3[2]	---	---	---	---	---	---	---	---	10	71%	4	29%
Total	104	61%	66	39%	113	62%	70	38%	135	61%	88	39%

Note: 1988 enrollment figures are from the *September 28, 1988, Student Membership* report (Research Office, 1988). 1989 enrollment figures are from the *September 27, 1989 Student Membership* report (Research Office, 1989b), and 1990 enrollment figures are from the *September 26, 1990, Student Membership* report. Percentages are rounded to the nearest whole percent.

[1] In 1988, Grade 2 students were not enrolled.
[2] In 1988 and 1989 Grade 3 students were not enrolled.

teachers have matured and acquired greater skill during the last three years. In addition, teachers are using self-evaluative techniques to improve their instructional skills.

In particular, leadership has suggested that during the first year of implementation, the school was primarily staffed with teachers from the non-public educational sector. These individuals are now assimilated into the public-school sector and the magnet program. In addition, teachers received advanced Montessori training during summer months which has enhanced the overall program.

Two particularly noteworthy perceptions were found for teachers regarding building level support and district support to implement the magnet theme. Twenty-one percent of teachers indicated that they felt as if they have had the necessary building level support (i.e., resource teachers, instructional assistant) to implement the theme (see Table 8; item 14). Furthermore, 64% believed they had the necessary administrative support to implement the theme (see Table 8; item 12). Alternately, in an apparent contradiction of opinion, 71% of the staff were satisfied with the quality of instructional leadership in the program (see Table 8; item 15).

The acquisition of supplies and materials has been problematic during the three years of program implementation. According to school leadership, materials ordered at the beginning of the first year of implementation did not arrive by the end of the year and the funding for these materials was lost at the close of the school year. Consequently, the school was short-funded to purchase both first year's and the second year's materials. Most of the equipment and supplies ordered for the current year have been received and were available for school start-up. Teacher perceptions of the availability of supplies and materials have consistently improved since the first year of implementation (see Table 8; item 9). For the current year, 71% of the teachers believed they were able to get necessary materials to implement the theme. When school leadership was asked how this situation would be addressed next year, he indicated that teachers will continue to submit prioritized lists of materials and equipment that they need for next year. Furthermore, according to school leadership, the district will place, before the State and the Federal court, a proposal to allow Montessori purchases at the beginning of the school year as well as a request to fund all Montessori classrooms with $25,000.00 for materials and supplies purchases.

Classroom and Building Observations

During the period spanning October through April observations were conducted in classrooms. Each of the observations were 20 minutes in duration with each minute being a

separate observation interval. Classrooms were observed on a weekly basis, with three randomly selected classrooms being observed on each visit. Additionally, as the Site Plan specifies, the program is expected to allow students to explore cultural diversity in the world. As such, visits were made to each classroom, and throughout the building, to document physical evidence of attempts to expose students to different ethnic cultures and backgrounds.

A central feature of the Faxon Montessori program is the provision for support of independent learning and the development of self-motivation. Teachers may address this goal by providing students with opportunities to engage in self-directed learning activities which demand minimal teacher consultation.

Observations in classrooms focused upon whether students were interacting independently with materials (student/teacher activity) and if not, what the instructional grouping looked like (working groups). Further, interactions among students and teacher were noted, and if the teacher was directing the activities of students (teacher/student consultation). Lastly, observers noted if students were engaged in activities which enhanced motor or hand-eye coordination (student motor coordination).

Student/teacher activity. Observers noted the activities of the student and teacher. Initially, the reader is referred to the independent interaction with materials activity data in Table 3. Students were involved with independent interaction with learning materials (e.g., manipulating, inspecting, constructing) during 84% of the observation intervals, an increase of 4% since the previous year. This student behavior differs from the working groups "individuals working independently on different activities." Working group observational data notes simply the structure of the work environment, and not the particular behavior(s) occurring in the learning setting.

Working groups. When working group data were examined, "individuals working independently on different activities" was found to be the most common work setting for the students in the Montessori classrooms. When examined by grades, it was found that Children's House students were engaged in this activity more often than first, second, and third graders (see Figure 1). Furthermore, both groups had increased individualized learning since the prior year. "Small groups" and "small groups with some individuals working separately" were prominent grouping structures for learning (29%). When examined by grade level of classroom, grades 1-3 were more often engaged in "small group" work. Furthermore, both classroom settings had declines since the prior year, in the utilization of "small group" work (see

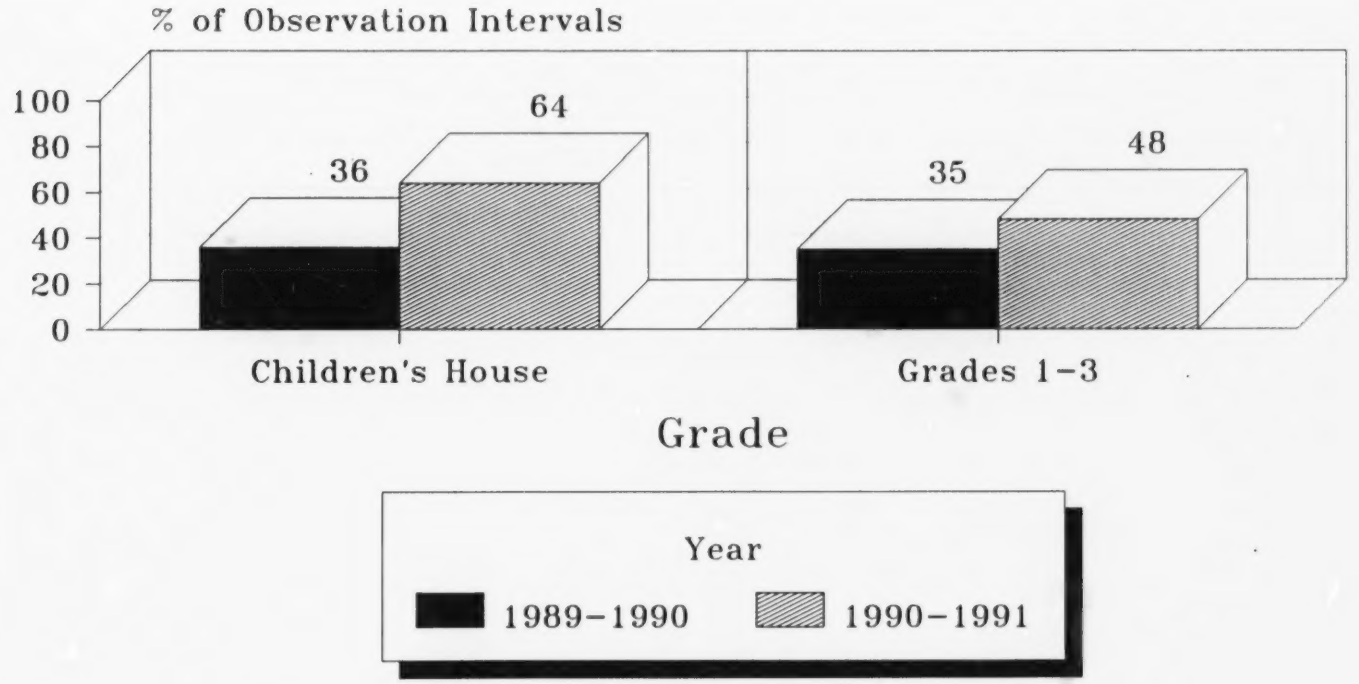
Table 3
Classroom Observations
Faxon Montessori
1989-1990, 1990-1991

Group/Activities	Percentage 1989-90[1]	1990-91[2]
Student/Teacher Activity		
Independent Interaction with Materials	80%	84%
Other Academic	17%	11%
Management	3%	2%
Management While Students Working on Academics	0%	< 1%
Interruption	0%	< 1%
Other	0%	< 2%
Total	100%	100%
Working Groups		
Total Group	20%	18%
Small Group	0%	3%
Small Groups & Individual	43%	23%
Individual-Same Activities	0%	0%
Individual-Different Activities	34%	55%
Other	2%	< 1%
Total	99%	100%
Teacher/Student Consultation		
Teacher Initiated Consultation	36%	30%
Student Initiated Consultation with Teacher	6%	10%
Teacher Silently Circulating	13%	7%
Teacher Initiated Management	6%	11%
Teacher Directing Small Group	15%	24%
Teacher Directing Total Group	17%	17%
Teacher Suggests Enrichment Activities	6%	2%
Other	1%	1%
Total	100%	102%
Student Motor Coordination		
Occurring	73%	70%
Not Occurring	27%	30%
Total	100%	100%

Note: Percentages are rounded to the nearest whole percent.
[1] Based upon 643 observation intervals.
[2] Based on 1040 observation intervals.

Figure 2). In addition to "small group" work, "total group" instruction was in evidence (12%). An examination of Figure 3 indicates that Children's House students, when compared to grade

Figure 1
Individuals Working Independently
Faxon Montessori, 1990, 1991

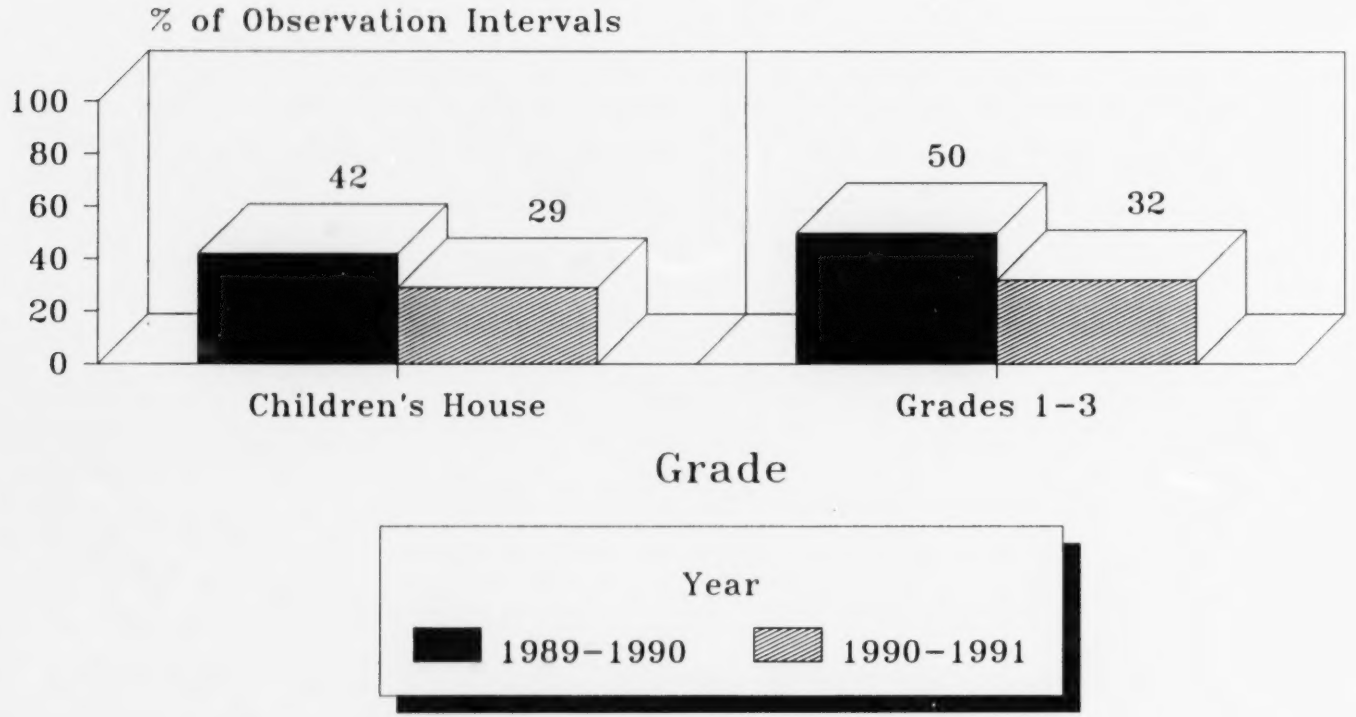


Note: Working on separate and/or similar projects. Percentages are rounded to the nearest whole percent.

Figure 2

Small Group Instruction by Grade

Faxon Montessori, 1990, 1991

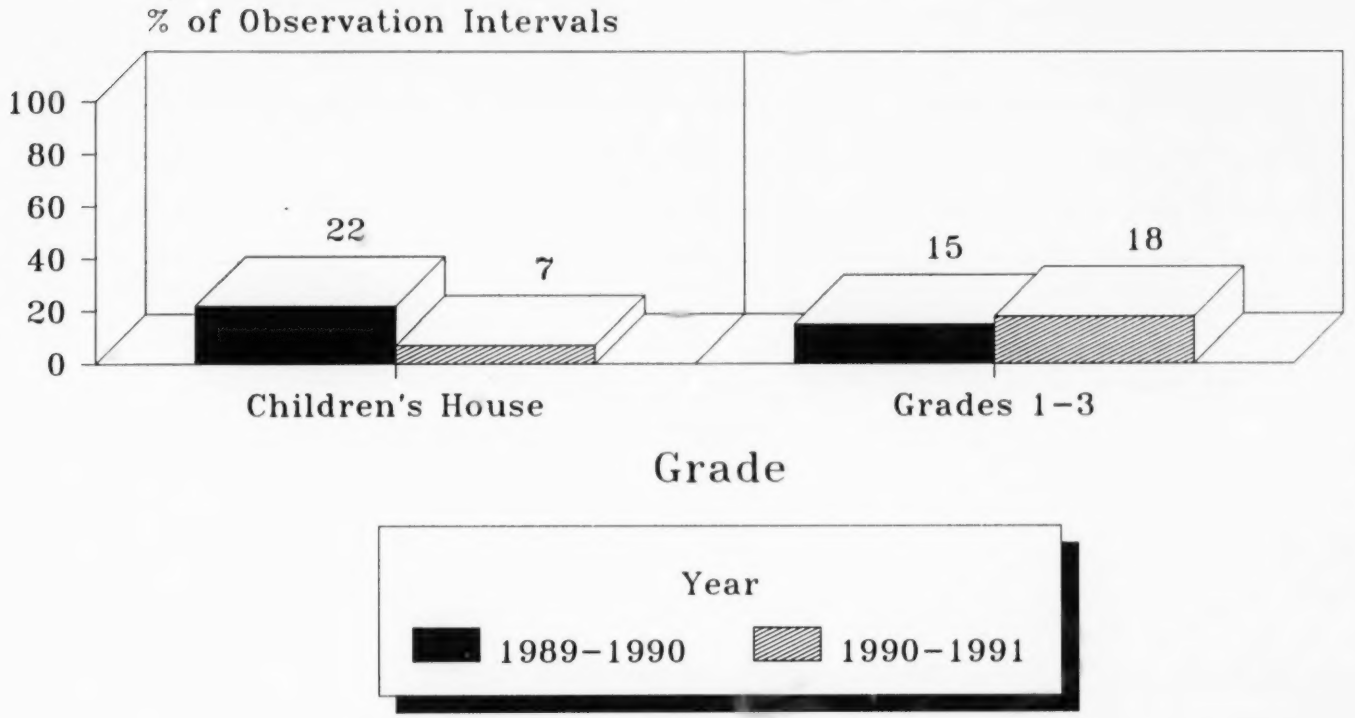


Note: Percentages are rounded to the nearest whole percent.

Figure 3

Total Group Instruction by Grade

Faxon Montessori, 1990, 1991



Note: Percentages are rounded to the nearest whole percent.

level students, are exposed to less "total group" instruction. Further, "total group" instruction in Children's House classrooms has declined by 15% from the previous year. Alternately, grade level classrooms have had a slight increase in "total group" instruction. As can be deduced from the student/teacher activity data and the grouping data, teacher involvement in formalized instructional presentations, management activities, and total group work are generally low. This is consistent with the goals and philosophy of the Montessori method in which learning should be independent and self-motivated.

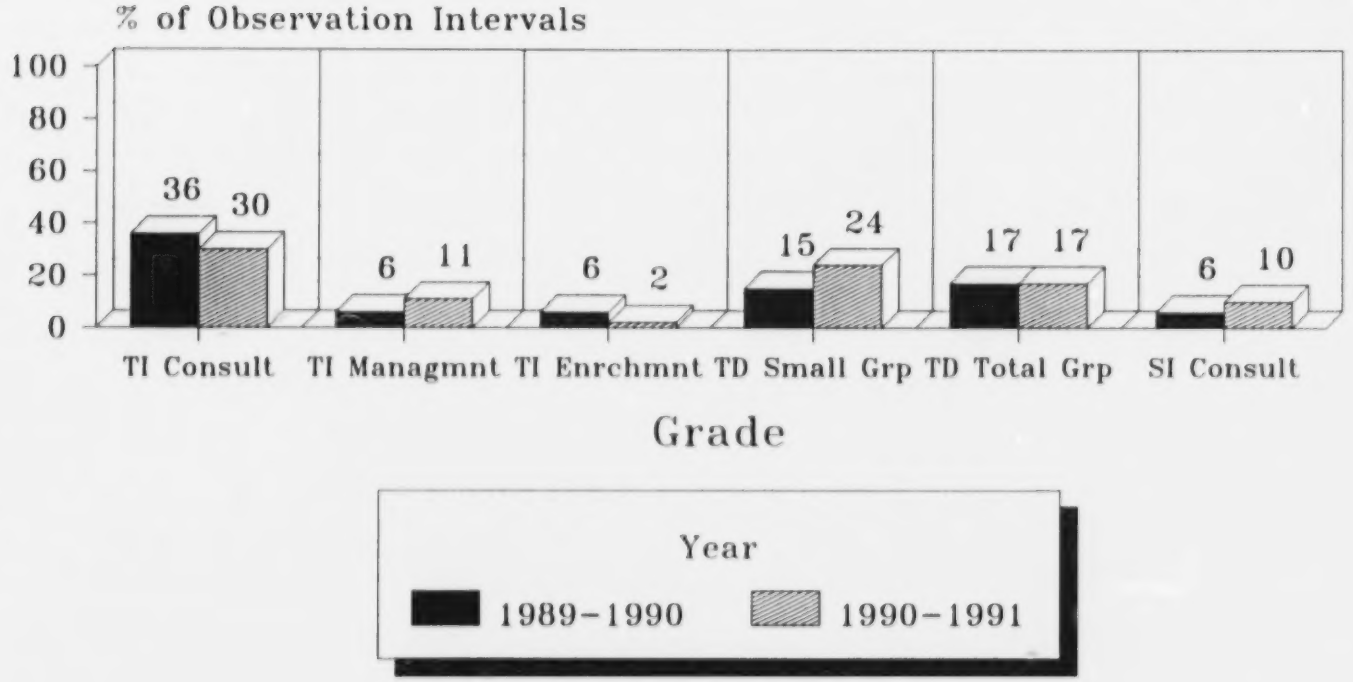
Teacher/student consultation. As noted previously, observations of teacher/student consultation noted whether and how the teacher and students interacted during the learning activities. Data from the previous and current year suggest that "teacher initiated consultation" has declined while "student initiated consultation" has increased since the previous year (see Table 3 and Figure 4). "Student initiated consultations" were still relatively low (10%). During 30% of the observation intervals, teachers were involved in carrying out consultation they had initiated with students. Teachers "silently circulated" around the classroom in 7% of the observation intervals, a decline of 6% since the previous year. Teachers "directed small groups" in 24% of the observations, an increase of 9% since the prior year. Seventeen percent of the observation intervals had evidence of teachers "directing total group" work (see Table 3 and Figure 4).

Student motor coordination. When classrooms were observed for evidence of activities designed to enhance student motor and eye-hand coordination, 70% of the observation intervals found students engaged in motor activities, a decline of 3% since the previous year (see Table 3).

Student self-motivation. According to the New Faxon Site Plan, one of the goals of the Montessori program is to assist students in becoming more self-motivated. It is of interest to note that when examining age groupings of students, observational evidence suggest that first, second, and third graders receive less consultation from teachers than do the Children's House students. It is interesting to note that, according to observational results, and as can be seen in Figures 1, 2, and 3, individual work was a prominent feature of classroom activity in both pre-kindergarten and the grades. Both individual work and small group work had increases since the previous year.

An examination of Figure 4 suggests less teacher consultation, when compared with the prior year of implementation. Alternately, for activities such as management, and directing

Figure 4
Teacher/Student Consultation
Faxon Montessori, 1990, 1991



Note: TI= Teacher Initiated; TD= Teacher Directed; SI= Student Initiated. Figures rounded to the nearest whole percent.

small and total groups, the teacher took an equal or greater role, as compared to the prior year's findings.

Exposure to ethnic backgrounds. As a component of the evaluation, observers documented physical evidence of exposure to different ethnic backgrounds. At the mid-year point in this evaluation, a total of 14 sites, including hallways, within the building were examined for evidence. Of these sites, 43% (6) displayed evidence of exposure to different ethnic backgrounds. The most common evidence consisted of posters of different countries, teacher displays, and bulletin boards. When compared with previous year findings, 32% fewer sites had evidence in the current year.

Perceptions

Parents, students, and teachers were contacted during the academic year to gather their perceptions of program functioning and to gain insight into emerging issues of importance to program participants.

Parent perceptions. Parent perceptions were gathered once (mid-spring). Parents of one-quarter of the students were randomly selected and contacted for a telephone interview. Parents were asked to respond to a series of questions probing their perceptions of the program, the school, and their child's educational progress. Telephone interviews were conducted by evaluation staff members. The reader is referred to Table 4 for a complete listing of the questions and parent responses for the three years of implementation.

Parent perceptions are very favorable regarding the Montessori program. However, when examined across the three years, ratings of several program areas have declined since the first year of implementation (50% of the questions have declining ratings of satisfaction). However, ratings continue to be high and parent satisfaction is still evident. In fact, in only two instances where parent ratings could indicate misunderstanding and/or dissatisfaction, were ratings below 80% of agreement (items 1, and 7).

Parents have previously reported feeling satisfied with the educational progress of their child (item 6, 96% in 1990) and, in particular, with the child's progress in basic skills (item 9, 82%). Alternately, current year ratings suggest declining satisfaction with their child's progress in other program areas: exposure to different cultures (item 21, 96% to 89%); development of self-motivation (item 22, 96% to 87%); and development of motor skills (item 24, 98% to 93%). While these aspects have declines in parent satisfaction, parents are still rating these aspects very high suggesting substantial satisfaction with all areas of program instruction.

Table 4
Response to Parent Questionnaire
Faxon Montessori 1989, 1990, & 1991

Statement	Response Alternatives	1988-1989 N	1988-1989 %	1989-1990 N	1989-1990 %	1990-1991 N	1990-1991 %
1. Way students were chosen for magnet schools for the 1988-1989 school year was fair.[1]	Agree	38	79%	29	73%	22	65%
	Disagree	3	6%	11	28%	10	29%
	No Opinion	7	15%	0	0%	2	6%
2. My child's application to Faxon Montessori for the 1989-1990 school year was handled in a reasonable amount of time.	Agree	40	83%	38	76%	44	82%
	Disagree	6	13%	10	20%	9	17%
	No Opinion	20	4%	2	4%	1	2%
3. The school bus or taxi takes my child to school and back in a reasonable amount of time.[2]	Agree	31	78%	37	86%	42	91%
	Disagree	6	15%	6	14%	2	4%
	No Opinion	3	7%	0	0%	2	4%
4. The school bus or taxi provides safe transportation for my child.[2]	Agree	34	85%	34	79%	45	96%
	Disagree	2	5%	9	21%	1	2%
	No Opinion	4	10%	0	0%	1	2%
5. The newsletters, notes, messages, or phone calls from my child's school have been understandable and helpful to me.	Agree	46	96%	46	94%	47	94%
	Disagree	1	2%	3	6%	2	4%
	No Opinion	1	2%	0	0%	1	2%
6. I am satisfied with the progress my child has made at the Faxon Montessori.	Agree	45	94%	48	96%	---	---
	Disagree	1	4%	2	4%	---	---
	No Opinion	2	2%	0	0%	---	---
7. I understand the Faxon Montessori Magnet theme.	Agree	39	81%	48	96%	40	71%
	Disagree	7	15%	2	4%	5	9%
	No Opinion	2	4%	0	0%	11	20%
8. Overall, I am satisfied with my child's teachers.	Agree	45	94%	49	98%	---	---
	Disagree	2	4%	1	2%	---	---
	No Opinion	1	2%	0	0%	---	---
9. I am satisfied with the progress my child has made in the basic skills, such as reading, writing, and arithmetic.	Agree	46	96%	48	96%	45	82%
	Disagree	2	4%	2	4%	7	13%
	No Opinion	0	0%	0	0%	3	6%
10. Overall, the principal of Faxon Montessori is responsive to my concerns.	Agree	43	90%	46	92%	51	93%
	Disagree	1	2%	3	6%	1	2%
	No Opinion	4	8%	1	2%	3	5%
11. My participation as a parent (or guardian) is welcomed at Faxon Montessori.	Agree	46	96%	49	98%	48	96%
	Disagree	1	2%	1	2%	1	2%
	No Opinion	1	2%	0	0%	1	2%
12. My child's school is kept clean and in good repair.	Agree	46	96%	48	98%	55	98%
	Disagree	0	0%	1	2%	1	2%
	No Opinion	2	4%	0	0%	0	0%
13. I would recommend the Faxon Montessori to other parents.	Agree	48	100%	45	90%	53	100%
	Disagree	0	0%	5	10%	0	0%
	No Opinion	0	0%	0	0%	0	0%

Table 4 (continued)
Response to Parent Questionnaire
Faxon Montessori 1989, 1990, & 1991

Statement	Response Alternatives	1988-1989 N	1988-1989 %	1989-1990 N	1989-1990 %	1990-1991 N	1990-1991 %
14. I believe that Faxon Montessori offers a quality education for all students.	Agree	48	100%	48	96%	---	---
	Disagree	0	0%	2	4%	---	---
	No Opinion	0	0%	0	0%	---	---
15. Overall, my child feels good about attending the Faxon Montessori magnet school.	Agree	48	100%	48	96%	---	---
	Disagree	0	0%	2	4%	---	---
	No Opinion	0	0%	0	0%	---	---
16. Overall, I am satisfied with Faxon Montessori magnet school.	Agree	45	94%	48	96%	51	96%
	Disagree	1	2%	2	4%	2	4%
	No Opinion	2	4%	0	0%	0	0%
17. My child attends the Extended Day program.	Agree	24	50%	22	44%	32	62%
	Disagree	24	50%	28	56%	20	39%
	No Opinion	0	0%	0	0%	0	0%
18. I believe the Extended Day program, which runs before and after school, gives proper supervison to students.[3]	Agree	22	92%	17	82%	25	83%
	Disagree	0	0%	3	14%	3	10%
	No Opinion	2	8%	1	5%	2	7%
19. I believe the Extended Day program gives enough emphasis to academic activites.[3]	Agree	13	54%	18	86%	25	83%
	Disagree	4	17%	3	14%	3	10%
	No Opinion	7	29%	0	0%	2	7%
20. The Extended Day program was one of the reasons you enrolled your child in Faxon Montessori.	Agree	8	32%	14	29%	10	32%
	Disagree	14	56%	35	71%	21	68%
	No Opinion	2	8%	0	0%	0	0%
21. I am satisfied with the degree of exposure given to different cultures and ethnic groups my child is receiving.[4]	Agree	---	---	48	96%	49	89%
	Disagree	---	---	1	2%	4	7%
	No Opinion	---	---	1	2%	2	4%
22. I am satisfied with the progress my child has made in the development of self-motivation.[4]	Agree	---	---	48	96%	48	87%
	Disagree	---	---	2	4%	5	9%
	No Opinion	---	---	0	0%	2	4%
23. I am satisfied with my child's opportunities for self-directed learning.[4]	Agree	---	---	48	96%	52	95%
	Disagree	---	---	2	4%	2	4%
	No Opinion	---	---	0	0%	1	2%
24. I am satisfied with my child's progress in the development of motor skills.[4]	Agree	---	---	49	98%	51	93%
	Disagree	---	---	1	2%	4	7%
	No Opinion	---	---	0	0%	0	0%

Note: Percentages are rounded to the nearest whole percent. Because of rounding, percentages may not total to 100% for every question.

[1] Only those parents who knew how children were selected are represented.

[2] Only those parents whose children utilize district transportation are represented.

[3] Only those parents whose children attended Extended Day activities are represented.

[4] This item not asked in 1988-1989.

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Parents are equally satisfied with their child's teachers (item 8, 98% in 1990) and feel the principal is responsive to their concerns (item 10, 93%). Overall, 96% of the parents are satisfied with the Montessori program as a whole (item 16) and all parents would recommend the program to other parents (item 13; 100%).

Additional questions were asked of parents regarding the quality of specific program aspects (see Table 5). When parents were asked to rate the performance of the overall Faxon Montessori program, 83% rated the program as "above average" or "excellent." When teachers were rated, 89% of the parents gave them a rating of "above average" or "excellent." School leadership received an "above average" or "excellent" rating by 84% of the parents. In all, each aspect examined in Table 5 received a rating of "above average" or "excellent" by more than 80% of the parents.

These findings provide supportive evidence that Faxon parents are pleased with the Montessori program, its teachers and staff, and its results. Alternately, school leadership may wish to explore the reasons for perceptual rating declines in satisfaction from the previous years of implementation.

In an effort to determine why parents chose Faxon Montessori for their child's education, parents were further questioned for their reasons. As Table 6 indicates, Faxon parents are a well-informed group of consumers. Seventy-eight percent of the parents were familiar with the Montessori approach to education and wanted their child in this environment. Other

Table 5
Additional Parent Perceptions
Faxon Montessori
1990-1991

Items	Excellent	Above Average	Average	Below Average	Poor	No Opinion
"How would you rate the performance of the . . ."						
Overall Faxon Program	47%	36%	9%	0%	2%	6%
Faxon Teachers	57%	32%	11%	0%	0%	0%
School Leadership	49%	35%	9%	0%	0%	7%
Opportunity for Parental Involvement	68%	23%	6%	4%	0%	0%
School Communication with Parents	65%	19%	11%	4%	0%	1%

Note: Percentages are rounded to the nearest whole percent.

Table 6
Reasons Why Parents Chose to Enroll Their Child in Faxon Montessori 1990, 1991

Reasons	1990 N	1990 %	1991 N	1991 %
Parents liked theme	42	84%	50	91%
Child attended last year	38	76%	41	76%
Other children attended school	25	50%	27	50%
Familiar with Montessori and wanted child in this environment	50	100%	42	78%
Other reasons	2	4%	31	59%

noteworthy responses included: parents liked the theme (91%); their child attended last year (76%) and other siblings attended school (50%).

Lastly, parents were queried regarding their source of information about the Montessori program (see Table 7). A substantial number of parents found out about Faxon by word-of-mouth (friends, co-workers: 51%; and school employees: 38%) and 57% relied upon school newsletters and brochures. Interestingly, the media not mentioned prominently in the previou year, appeared to become a growing source of information for parents. Twenty-seven percent mentioned the newspaper; 6% mentioned the radio; and 15% mentioned television as sources of information about Faxon.

Teacher perceptions. Teacher questionnaires were administered on-site during re;u-larly scheduled faculty meetings with evaluation personnel. Perceptions were gathered twice during the year (early fall, late spring). Perceptions and attitudes of teachers and paraprofes-sionals are presented. At the spring administration, only teachers were asked to respond to the questionnaire. The reader is referred to Table 8 for a listing of the questionnaire items and their respective responses.

Teacher ratings, across three years of reporting, have declined for more than 50% of the questionnaire items. Additionally, in the current year, more than 50% of the items have ratings of satisfaction of less than 80%, a typical standard for program satisfaction.

A factor potentially contributing to lower ratings in the current year is the number of teachers who responded "No Opinion" or "Not Applicable" to many items. This group of

Table 7
How Parents Learned About
Faxon Montessori
1990, 1991

Item	1990 N	1990 %	1991 N	1991 %
Friends, Co-workers, Etc.	27	31%	28	51%
Newspaper Advertisements/Articles	12	14%	15	27%
Parent/Teacher Organizations	5	6%	8	15%
Radio	3	3%	3	6%
School Brochures/Newsletters	22	25%	31	57%
School Employees	7	8%	21	38%
Students	3	3%	3	6%
Television	8	9%	8	15%
Other	1	1%	0	0%

Note:Percentages are rounded to the nearest whole percent.

teachers has grown substantially since the beginning of program implementation. Of those who did express an opinion, teachers appear to have a generally positive perception of the Montessori program.

Faxon teachers report that: they understand the goals of the Montessori theme (item 1, 93%); believe the school is implementing the program according to stated goals and objectives (item 2, 86%). Additionally, teachers believe their students are making good academic progress because of the Montessori theme (item 13, 86%). A positive shift in perceptions was found when teachers were asked if the program had problems hindering effective implementation (item 16). In the previous year, 58% of the teachers believed problems existed. In the current year, only 14% reported that the program had problems.

Staff Development and Support. As mentioned earlier, when teachers were asked about their degree of satisfaction with staff development and in-service regarding the magnet plan, a majority of teachers were satisfied (79%; item 5). Items 6 and 7, however, suggest that teacher satisfaction was not as great for before school (item 6) or during school year (item 7)

Table 8

Response to Teacher Questionnaire

Faxon Montessori

1989, 1990, & 1991

Statement	Response Alternatives[1]	1988-89 N	1988-89 %	1989-90 N	1989-90 %	1990-91 N	1990-91 %
1. Understand goals and objectives of Montessori magnet theme.	Agree	8	89%	12	100%	13	93%
	Disagree	1	11%	0	0%	0	0%
	No Opinion*	0	0%	0	0%	1	7%
2. Believe school is implementing Montessori program according to goals and objectives.	Agree	8	89%	12	100%	12	86%
	Disagree	1	11%	0	0%	0	0%
	No Opinion	0	0%	0	0%	2	14%
3. The opening of school went smoothly.[2,3]	Agree	--	----	11	85%	19	86%
	Disagree	--	----	0	0%	3	14%
	No Opinion	--	----	2	15%	0	0%
4. I attended the in-service session held prior to the opening of school.[2,3]	Agree	--	----	11	85%	14	64%
	Disagree	--	----	1	8%	2	9%
	No Opinion*	--	----	1	8%	6	27%
5. Satisfied with staff development/in-service sessions regarding magnet school plan.	Agree	4	50%	5	46%	11	79%
	Disagree	4	50%	6	55%	2	14%
	No Opinion*	0	0%	0	0%	1	7%
6. The Montessori in-service was beneficial to me.[2,3]	Agree	---	-----	12	100%	14	64%
	Disagree	---	-----	0	0%	2	9%
	No Opinion*	---	-----	0	0%	6	27%
7. Satisfied with staff development/in-service sessions regarding theme.[2]	Agree	--	----	--	----	10	71%
	Disagree	--	----	--	----	4	29%
	No Opinion*	--	----	--	----	0	0%
8. Am certified to teach Montessori.	Agree	6	75%	11	92%	7	50%
	Disagree	2	25%	1	8%	2	14%
	No Opinion*	0	0%	0	0%	5	36%
9. Been able to get all materials needed to implement magnet school theme.	Agree	4	44%	6	50%	10	71%
	Disagree	4	44%	6	50%	2	14%
	No Opinion*	1	11%	0	0%	2	14%
10. Facility is adequate and meets my instructional needs.[3]	Agree	6	67%	9	75%	15	68%
	Disagree	3	33%	2	25%	3	14%
	No Opinion*	0	0%	0	0%	4	18%
11. Able to infuse magnet curriculum into basic curricula of district.[3]	Agree	6	67%	8	67%	13	59%
	Disagree	3	33%	1	8%	2	9%
	No Opinion*	0	0%	3	25%	7	32%
12. Have necessary building level administrative support to implement program.	Agree	7	78%	11	92%	9	64%
	Disagree	2	22%	1	8%	4	29%
	No Opinion*	0	0%	0	0%	1	7%
13. Believe students are making good academic progress because of Montessori magnet theme.	Agree	9	100%	12	100%	12	86%
	Disagree	0	0%	0	0%	0	0%
	No Opinion	0	0%	0	0%	2	14%

Table 8 (continued)

Response to Teacher Questionnaire

New Faxon Montessori

1989, 1990, & 1991

Statement	Response Alternatives[1]	1988-89 N	1988-89 %	1989-90 N	1989-90 %	1990-91 N	1990-91 %
14. Believe students enjoy working in the Montessori theme.[4]	Agree	9	100%	12	100%	--	---
	Disagree	0	0%	0	0%	--	---
	No Opinion	0	0%	0	0%	--	---
15. Enjoy teaching in the Montessori theme.[4]	Agree	8	89%	---	-----	---	---
	Disagree	0	0%	---	-----	---	---
	No Opinion	1	11%	---	-----	---	---
16. Building support staff provided support needed to implement magnet theme (i.e., resource teachers).	Agree	6	67%	7	58%	3	21%
	Disagree	2	22%	5	42%	7	50%
	No Opinion	1	11%	0	0%	4	29%
17. Believe Montessori magnet theme has improved desegregation in the district.[4]	Agree	8	100%	11	92%	----	----
	Disagree	0	0%	0	0%	----	----
	No Opinion	0	0%	1	8%	----	----
18. I am satisfied with the quality of instructional leadership and assistance provided to me.[3]	Agree	---	-----	6	50%	10	71%
	Disagree	---	-----	5	42%	2	14%
	No Opinion	---	-----	1	8%	2	14%
19. I believe this school has several problems hindering the effective implementation of the magnet theme.[2]	Agree	---	-----	7	58%	2	14%
	Disagree	---	-----	5	42%	9	64%
	No Opinion	---	-----	0	0%	3	21%
20. I am satisfied with the quality of communication among teachers.[2]	Agree	---	-----	6	50%	8	62%
	Disagree	---	-----	6	50%	3	23%
	No Opinion	---	-----	0	0%	2	15%
21. I am satisfied with the quality of communications between myself and school leadership.[2]	Agree	---	-----	9	75%	12	86%
	Disagree	---	-----	3	25%	2	14%
	No Opinion	---	-----	0	0%	0	0%
22. Overall, what rating would you give this magnet school this year?	Excellent	4	44%	7	58%	7	50%
	Good	5	56%	4	33%	3	21%
	Average	0	0%	1	8%	4	29%
	Fair	0	0%	0	0%	0	0%
	Poor	0	0%	0	0%	0	0%

Note: Percentage are rounded to the nearest whole percent.

[1] Response choices were "Agree", "Disagree", "No Opinion", "Not Applicable". "No Opinion" response was used for reporting purposes. An asterisk (*) indicates those instances of collapsed response categories.
[2] This question was not asked of teachers in the 1988-1989 questionnaire and/or 1989-1990.
[3] Question asked in Fall 1990 of teachers and paraprofessionals
[4] This question was not asked of teachers in the 1989-1990 or 1990-1991 questionnaire.

Montessori in-service. When queried about support, 64% of the teachers believed they have received the building level administrative support needed to implement the magnet theme

(item 12). Alternately, only 21% of the teachers report having received the needed support from building level magnet theme support staff (item 14). The low rating of teacher satisfaction may be due to a single factor: the lack of two resource teachers. At the same time teachers were reporting dissatisfaction with resource support, teachers are indicating moderate satisfaction with the quality of instructional leadership and assistance (item 15; 71%).

Supplies and Materials. Teacher perception results, across three years of implementation, indicate that greater numbers of teachers, annually, believe they are receiving the necessary materials to implement the Montessori theme (44% to 50% to 71%; item 9). About two-thirds of the teachers believed the school facility was adequate and met their instructional needs (item 10).

Within-School Communication. Teacher ratings for questions regarding the quality of communication (helpfulness, timeliness, and worth) among teachers has improved since the previous year but still are moderate (items 17 and 18). While 86% of the respondents felt communication quality was satisfactory for interaction with school leadership (an increase of 11% since the previous year), teachers were less satisfied with communication among colleagues (62%; item 17). School leadership, in an attempt to improve within-school communication, has established, during summer in-service (1990-1991), a communication network with specific persons in grade levels who meet with the principal on a standing committee basis to communicate concerns and needs. Based on the changes seen in items 17 and 18, communication, while still not highly satisfactory to teachers, appears to have improved since the previous year.

To explore the perceptions of teachers regarding their physical safety while teaching at Faxon, one questionnaire item asked teachers to indicate how safe they felt while at school. Seventy-one percent of the teachers responded feeling "very safe." Twenty-one percent felt "moderately safe/unsafe." No teachers felt "unsafe" and 8% had no opinion.

Lastly, teachers were asked to rate the overall implementation of the magnet theme during the current year. As can be seen in Table 8 (item 19), seventy-one percent (10) of the teachers rate the program as "good" or "excellent" for the current year. Alternately, teacher ratings of program implementation, during three years of implementation, suggest declining satisfaction. At the end of the first year of implementation, 100% of the teachers rated the program as "good" or "excellent." The second year was rated "good" or "excellent" by 91% of the teachers.

As noted above, 71% rated the program as "good" or "excellent" in the third year of implementation.

Student perceptions. Student perceptions were gathered once (late spring). Students were selected to respond to a questionnaire as a result of their classroom being sampled. One-third of the classes were randomly sampled. Kindergarten, grade one, grade two, and grade three students participated. A verbal 10-item questionnaire with developmentally appropriate questions was administered during class time. The reader should be reminded to avoid making judgments regarding program effectiveness based upon young children's comments. With this in mind, the reader may notice several inconsistencies in the perceptions of students. Table 9 displays the responses of students and the questions students were asked. Overall, students report enjoying the Montessori program at Faxon (item 1, 90%) and believe they have learned a lot during this school year (item 2, 94%). Alternately, students report less enjoyment for using cursive writing (item 5, 78%), and working independently (item 8, 73%). Students report enjoying their reading book (item 6; 95%); choosing their own activities during school (item 7; 89%); and working in small groups (item 9; 83%). A notable inconsistency can be found for items 1 and 10. Although 90% of the students like going to Faxon (item 1), only 67% want to come back next year (item 10).

Extended Day

Faxon Montessori offers morning and afternoon extended day programs as specified in the Long-Range Plan. The morning session operates during the hours of 7:00 to 9:10 a.m. The afternoon session provides supervision during the hours of 3:45 to 5:30 p.m. The sessions are staffed by eight Montessori certified teachers and six Montessori trained paraprofessionals.

Faxon's extended day program has three foci: social and academic development; enrichment; and tutoring. Each instructional focus has established goals, objectives, and suggested activities. (For a more detailed description of the extended day program at Faxon, see Appendix A.) Student participation is voluntary. Students are allowed to participate in any session or on any day their parents need the service. As such, no formal enrollment is required.

Morning extended day sessions at Faxon are recreational in nature rather than providing a structured learning environment. The emphasis is on providing students an opportunity to pursue the kinds of activities they would seek while away from school. Activities such as games, puzzles, videos, art, and outdoor ventures are offered to students. The afternoon session

Table 9
Response to Student Questionnaire
Faxon Montessori
1989, 1990, & 1991

Statement	Response Alternatives	1988-1989 N	1988-1989 %	1989-1990 N	1989-1990 %	1990-1991 N	1990-1991 %
1. Do you like going to the New Faxon Montessori School?	Yes	49	91%	58	83%	88	90%
	No	5	9%	12	17%	10	10%
2. Do you think you have learned a lot in school this year?	Yes	53	98%	65	93%	91	94%
	No	1	2%	5	7%	6	6%
3. Would your friends like this school?	Yes	44	81%	61	87%	87	91%
	No	10	18%	9	13%	9	9%
4. Do you like having older and younger children in your class?	Yes	43	81%	58	83%	83	87%
	No	10	19%	12	17%	12	13%
5. Do you like to write with cursive letters?	Yes	48	91%	54	77%	75	78%
	No	5	9%	16	23%	21	22%
6. Do you like your reading book?	Yes	46	87%	50	71%	87	95%
	No	7	13%	20	29%	5	5%
7. Do you like to choose your own activities?	Yes	52	98%	62	90%	85	89%
	No	1	2%	7	10%	11	12%
8. Do you like to work all by yourself?	Yes	31	57%	60	86%	68	73%
	No	23	43%	10	14%	25	27%
9. Do you like to work in small groups?	Yes	48	89%	38	54%	80	83%
	No	6	11%	32	46%	16	17%
10. Would you like to go to this school next year?[1]	Yes	---	---	38	54%	62	67%
	No	---	---	32	46%	30	33%

Note: Percentages are rounded to the nearest whole percent.
[1] This question not asked in 1988-1989.

provides a more structured environment. Groups of students follow a sequence of activities such as puppetry, storytime, special tutoring, and foreign language instruction.

Table 10 presents participation figures for both sessions. Since the program does not require enrollment, the figures were estimates of average participation. Accordingly, the extended day program served 114 (60% minority) students. An examination of Table 2 indicates that the racial composition of the school is 61% minority. When compared with the racial composition of the extended day participants, it appears as if the minority/non-minority

Table 10
Extended Day Participation
Faxon Montessori
1990-1991

	Minority		Non-Minority		Total	
Time	N	%	N	%	N	%
Before School Only	8	50%	8	50%	16	14%
After School Only	24	73%	9	27%	33	29%
Both	36	55%	29	45%	65	57%
Total	68	60%	42	40%	114	

Note: percentages are rounded to the nearest whole percent. Data were collected as of December 7, 1990.

enrollment of the extended day program was representative of that found in the school. Fifty-seven percent of the students attended both morning and afternoon sessions.

Achievement Data

Student achievement indices are reported for the ITBS and MMAT. ITBS percentile ranks of students at Faxon are reported by grade level and minority status of students.

ITBS. Achievement data for students enrolled in kindergarten, grade one, grade two, and grade three are presented in Table 11. The scores reported are percentile ranks and represent the percentile rank of the mean grade equivalent score for the group in the particular content area and grade tested. The 50th percentile is the national norm.

Reading achievement. As shown in Table 11 the reading percentile ranks for first through third grade indicate that Faxon students are scoring above the national norm. Achievement scores for minority and non-minority students indicate that, at the first and second grade, both groups are scoring above the national norm in reading. At the third grade level, minority students are scoring below national norm and non-minority students are above the norm. Kindergarten students were not tested for reading achievement during the current year.

When grade level reading achievement was examined for the three years of program implementation, reading scores have typically improved. Only at the first grade level, where scores increased, then decreased, and then increased to levels above the first year of implementation, was achievement growth inconsistent.

Language achievement. Kindergarten and second grade students scored above district and national norms on the ITBS language arts test. First grade students were above the national

Table 11
Iowa Tests of Basic Skills Percentile Ranks
Faxon Montessori
1989, 1990, & 1991

Grade / Ethnic	Reading			Dist.	Language			Dist.	Math			Dist.
	1989	1990	1991	1991	1989	1990	1991	1991	1989	1990	1991	1991
Kindergarten	83	89	--	--	57	72	77	61	73	77	69	64
Minority	82	82	--		49	61	66		65	65	65	
Non-Minority	92	96	--		76	89	80		87	87	75	
Grade 1	30	78	67	53	46	85	63	72	48	85	65	65
Minority	31	68	54		45	74	57		37	70	50	
Non-Minority	40	86	81		69	89	72		72	91	83	
Grade 2	--	55	72	50	--	52	74	64	--	56	72	64
Minority	--	51	63		--	38	68		--	57	66	
Non-Minority	--	67	81		--	62	80		--	57	80	
Grade 3	--	--	45	44	--	--	47	57	--	--	37	48
Minority	--	--	37[1]		--	--	41[1]		--	--	34[1]	
Non-Minority	--	--	58[1]		--	--	59[1]		--	--	42[1]	

Note: Percentile ranks are converted from mean grade equivalent scores and are based on individual student norms. National norm is 50.

[1] Based on less than 10 students.

norm but below the district norm. Third graders scored below district and national norms. Results for minority and non-minority students for the language test indicate that both minority and non-minority students scored above district and national norms for kindergarten and grade two students. First grade minority students were below district norms but above national norms. Third graders minority students were below both district and national norms. Non-minority students at each grade level tested were above both district and national norms in ITBS language arts.

An examination of grade level language achievement across three years of implementation, kindergartners improved in the second year of implementation and remained at the same level at the end of the third year. First graders improved their scores at the end of the second year and declined substantially at the end of the third year. Second graders substantially improved their performance at the end of the third year of implementation.

Math achievement. Minority and non-minority students at the kindergarten, first, and second grades, scored at or above national norms on the ITBS math tests. Third graders, both minority and non-minority, and the grade as a whole, scored below district and national norms.

Math achievement scores indicate growth at the end of the second year of implementation but declines at the end of the third year for kindergarten and first grade students. Second graders had large gains from the previous year.

ITBS achievement scores indicate that Faxon students generally are scoring above their peers in the district and nationally. The one exception is third grade students who score below district and national norms in language arts and math. In reading, third graders are above district norms but below national norms. Additionally, non-minority students have consistently higher scores, when compared to minority students. At no grade level or test content are minority students outperforming their non-minority classmates. One pattern of achievement performance found was that for first graders. For each of the three content areas examined, first graders in 1990 had substantially higher scores than did their 1989 peers. In 1991, first graders were scoring well below their 1990 peers.

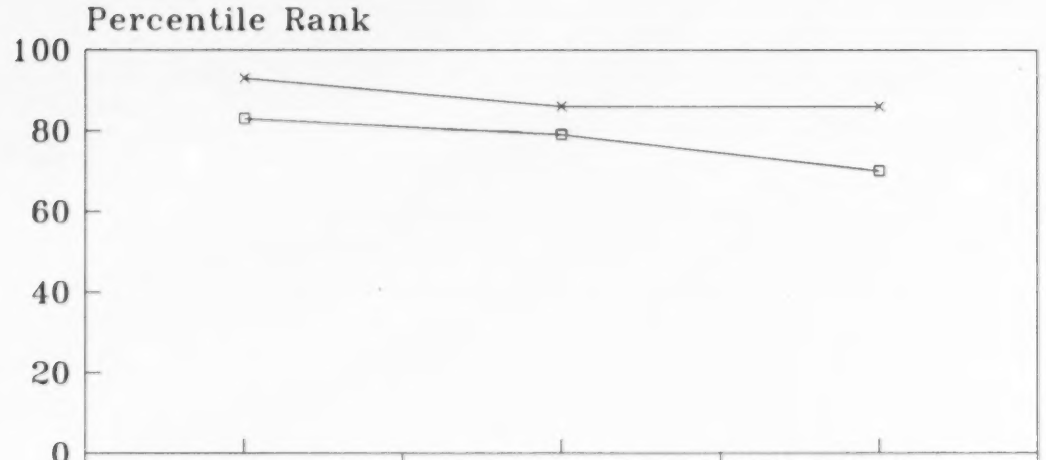
Achievement trends. In order to examine longitudinal achievement trends among minority and non-minority students at Faxon, 1989 kindergarten students were tracked across the three years of program implementation. ITBS reading results indicate that, after a slight decline as first graders, non-minority students have stabilized their reading performance at the end of the third year and remain above the eightieth percentile (see Figure 5). Alternately, while still scoring above national norms, minority students have a steadily declining achievement trend. The reading achievement discrepancy between minority and non-minority students has widened slightly since the first year of program implementation.

1989 kindergarteners, after an increase as first graders, had a slight decline in ITBS language scores at the end of the third year of program implementation (see Figure 6). As first graders, minority students almost achieved parity with non-minority students. However, the achievement gap widened slightly in the third year. Alternately, the language arts achievement discrepancy has narrowed since the first year of program implementation.

ITBS math achievement trends for minority and non-minority students have followed a similar pattern (see Figure 7). After moderate gains from kindergarten to first grade, both groups had declines in the third year of implementation. However, the achievement discrep-

Figure 5

ITBS Reading Achievement Across Time: Kindergarten Cohort



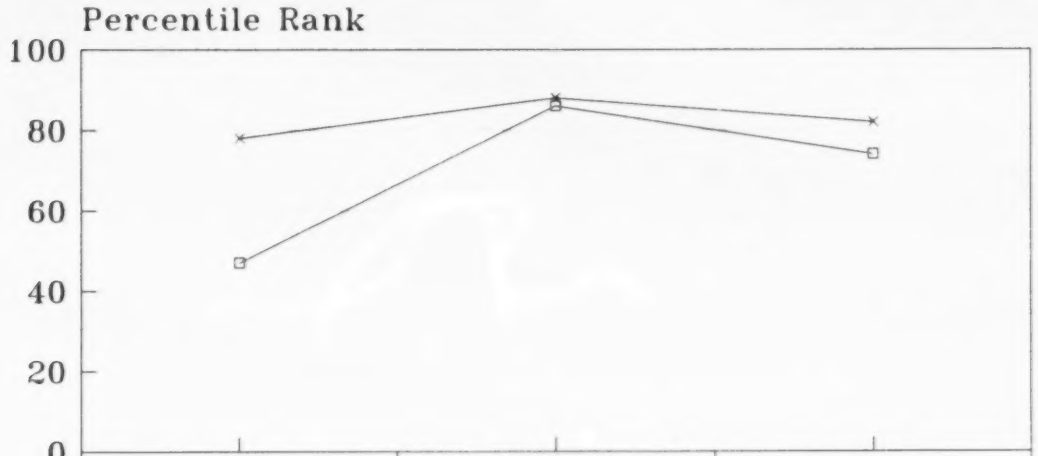
	Kindergrtn 1989	First 1990	Second 1991
Minority	83	79	70
Non-Minority	93	86	86

Grade/Year

Note: Percentile ranks were converted from mean grade equivalent scores

Figure 6

ITBS Language Achievement Across Time: Kindergarten Cohort



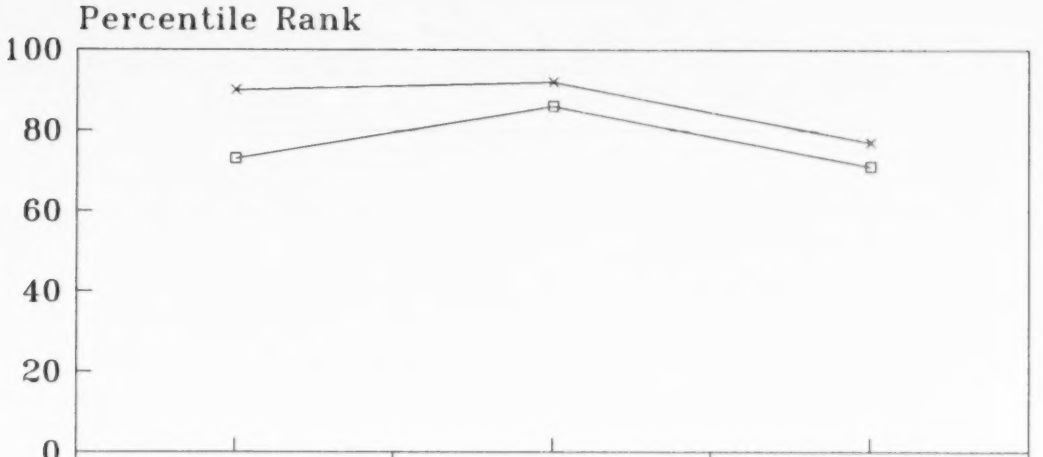
	Kindergrtn 1989	First 1990	Second 1991
Minority	47	86	74
Non-Minority	78	88	82

Grade/Year

Note: Percentile ranks were converted from mean grade equivalent scores

Figure 7

ITBS Math Achievement Across Time: Kindergarten Cohort



	Kindergrtn 1989	First 1990	Second 1991
Minority	73	86	71
Non-Minority	90	92	77

Grade/Year

Note: Percentile ranks were converted from mean grade equivalent scores

ancy between minority and non-minority students has narrowed from 17 percentile points to 6 percentile points.

Faxon Montessori students compared to traditional elementary students. In order to explore achievement differences between Faxon students and traditional elementary school students, a random sample of the district's traditional school students was taken at each grade level to serve as a comparison group. Approximately equal numbers of students were sampled at each grade.

In order to compensate for pre-existing achievement differences between the magnet and traditional groups when they entered the 1990-1991 school year, prior year ITBS achievement scores were used as covariates for grade three students in an analysis of covariance (ANCOVA) procedure. Analysis of variance (ANOVA) procedures were used when a covariate was not available. ANOVA's were used for kindergarten, first, and second grades. Both ANCOVA and ANOVA procedures used mean grade equivalent scores for analyses. Kindergarten, first, and second grade means could not be adjusted with a covariate. As such, unadjusted means were used for analyses. At the third grade level, means were adjusted for pre-existing differences with 1990-1991 Cognitive Abilities Test scores. As such, unadjusted and adjusted means are reported. Mean grade equivalent scores were converted to percentile ranks for presentation purposes. Summary data for these analyses can be found in Table 12. The reader should note the footnote to Table 12 which explains the testing of significant differences between groups.

Reading achievement. No significant differences were found between Faxon and traditional students at the first and third grade levels. At grade two, significant differences were found between the two groups. An examination of the adjusted means, converted to percentile ranks, indicates that Faxon students had a larger mean.

Language achievement. Significant differences between groups were found for first and second grade students. At the first grade level, the comparison group had a larger mean. At the second grade level, Faxon students outperformed the comparison group. No significant differences were found for kindergarten or third grade groups.

Math achievement. Significant differences were found for kindergarten students. An examination of the group means indicated that the comparison group outperformed the Faxon group. No significant differences were found for first through third grade groups.

Table 12
Summary Data for the 1991 ITBS Reading , Language, & Math Tests for Faxon Montessori and Randomly Selected Traditional Elementary Students

Test / Grade Means	Faxon Montessori Percentile Rank	Traditional Percentile Rank	Probability Level
Reading			
Grade 1			
Unadjusted mean	68	55	.992
Grade 2			
Unadjusted mean	73*	40	< .002
Grade 3			
Unadjusted mean	47	42	
Adjusted mean	46	42	.926
Language			
Kindergarten			
Unadjusted mean	72	70	.675
Grade1			
Unadjusted mean	65	70*	< .002
Grade 2			
Unadjusted mean	74*	48	< .007
Grade 3			
Unadjusted mean	50	42	
Adjusted mean	48	43	.795
Math			
Kindergarten			
Unadjusted mean	71	85*	< .011
Grade1			
Unadjusted mean	64	62	.369
Grade 2			
Unadjusted mean	76	67	.167
Grade 3			
Unadjusted mean	41	40	
Adjusted mean	34	41	.339

* = Difference at the $P \leq .05$ level of significance was found between the two groups on this test. Analyses were done using grade equivalent scores. For presentation, these scores were converted to percentile ranks. For kindergarten, first, and second grade students, pretest scores were not available to use in an analysis of covariance. The adjusted mean represents a statistical estimate of the students' performance on the 1990 posttest assuming that the students had identical 1989 Cognitive Abilities Test means. This adjusted mean is computed during the analysis of covariance procedure.

MMAT. MMAT scores indicate that Faxon third grade students outperformed other district third graders in each of four content areas (reading/language arts, math, science, and

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social studies) (see Table 13). Alternately, Faxon students scored slightly below Missouri state norms.

Summary and Recommendations

Faxon Montessori has recently completed their third year implementing the magnet theme. This summative evaluation has documented enrollment and racial composition figures, status of implementation efforts, and achievement test performance.

The three year evaluation effort indicates that implementation has been successful. The program is now fully staffed with trained Montessori teachers and leadership. At the end of the second year of implementation, school leadership summarized the program environment, "As a new school we have gone through the process of formation and norming and are at a point of understanding the complexities of our interaction. I feel we are now a community and that we are learning ways to effectively work together. We are a staff, not a bunch of people anymore."

With the exception of materials acquisitions, transportation, and resource support staffing, the program has continued to progress and, based on the evidence of evaluation efforts, has achieved the objectives and goals outlined for Montessori education in the Faxon site plan and the *Long-Range Magnet School Plan* (Hale & Levine, 1986). As the third year of implementation came to a close, school leadership has indicated that efforts have been undertaken to improve the acquisition of Montessori materials. Transportation problems have been solved, and Montessori resource teachers have been identified and recommended for employment for the upcoming year.

Table 13
Faxon Montessori
Missouri Mastery & Achievement Tests Average Scale Scores
Grade 3, 1991

Group	Reading/ Language Arts	Math	Science	Social Studies
Faxon	309	296	341	322
District	274	289	290	286
State	321	326	344	336

Enrollment figures indicate that three grade levels exceed program capacities for the current year. First grade enrollment exceeded program capacity by 33%. Of particular concern was the actual enrollment for third grade which reached only 35% of the program capacity. Additionally, racial composition figures across three years of implementation indicate that Faxon has approximated the desegregative goals with 61% minority/39% non-minority enrollment. Pupil-to-teacher ratio data indicate that three classrooms at Faxon exceeded specified class size limits. This would suggest that grade level enrollments exceeding program capacity have led to increased class sizes contradicting court-ordered limits for the pupil-teacher ratio.

Observational data of Montessori classrooms indicated that teachers were providing students with an educational experience in accordance with the philosophy and goals of Montessori principles and practices. Students are engaged largely in independent learning opportunities. The rate of teacher management, teacher and student consultation, and interruption were found to be minimal. Observational data indicate further that students are active, motivated learners and initiate many learning activities without the need for teacher direction. The physical environment of the school was found to have evidence, while not as much as in prior years, of exposing students to ethnic and cultural diversity, as planned for in site plan goals.

Teachers and leadership have expressed concern regarding the lack of resource staff support, which has been attributed to vacant elementary resource teacher positions. Faxon should have resource teacher support in the upcoming year, if district staffing reductions do not impact Montessori resource teachers. Paraprofessionals have been involved in staff development activities and are regularly involved in training opportunities at the school. The future of Montessori education in the Kansas City, Missouri School District has received a much needed boost. School leadership and district administration have been involved in bringing training programs to the Kansas City area. Summer training programs will be available for teachers who wish to be Montessori educators, but could not leave the city for an extended period of training.

The overall perceptions of parents, school leadership, and staff at the end of the third year of implementation are generally positive regarding the implementation of the magnet theme. Alternately, ratings of satisfaction among teachers and parents have declined somewhat during the three years of implementation. While ratings still indicate satisfaction, annually, modest changes in satisfaction are evident. Teachers continue to rate the overall program high and,

with a few exceptions, appear satisfied with the implementation effort thus far. Parents are generally satisfied with most aspects of the Montessori program. Student achievement data revealed that Faxon's first, and second graders scored above the national norm on reading, math, and language ITBS subtests. Kindergarteners scored above district and national norms in language and math. Kindergarteners were not tested in ITBS reading in 1991. When examined for minority and non-minority students, both groups at kindergarten, first, and second grade scored at or above the national norm in each of the ITBS tests.

When achievement was examined for intact cohorts of students, across three years of program implementation, it was found that non-minority students had higher scores in each ITBS test. Furthermore, three year trends indicate that both minority and non-minority students have had declining performance, relative to the national norm group, in reading ITBS performance. Language achievement trends indicate that, after an initial gain as first graders, the cohort's performance declined somewhat in the third year. However, third year performance exceeded first year scores for both minority and non-minority cohorts. Math achievement trends suggest a similar pattern of performance, as found for language. Growth in the first grade was followed by declines in the third grade, in this case, to levels below their kindergarten performance.

Lastly, statistical comparisons between Faxon students and a random sample of traditional school students indicate that Faxon students outperform traditional students at second grade reading, and second grade math. However, traditional kindergarten students had higher scores in math and traditional first graders outperformed Faxon students in language. Given the findings of this summative evaluation, the following recommendations are offered:

1. Monitor enrollment placements to assure compliance with Federal court guidelines regarding pupil-to-teacher ratio in classrooms. Efforts to maintain an effective classroom learning environment should not be overshadowed by the desire to place interested students in this successful magnet program. Enrolling students beyond the stated program capacity of grade levels has led to class sizes exceeding court guidelines regarding pupil-to-teacher ratios.

2. School leadership may wish to explore with parents, through School Advisory Council (SAC) meetings, the trend toward declining ratings of parent satisfaction with specific aspects of the Montessori program. While parent perceptions of the program remain good, the trend of declining satisfaction, in certain areas, is an important issue of concern. It may be discovered that declining ratings are primarily due to parents new to the program as new grade levels are added annually.

3. School leadership may wish to explore with teachers the trend toward declining ratings of satisfaction with specific aspects of the Montessori program. Specifically, Faxon teachers indicate declining satisfaction with school-based support, Montessori in-service, and overall program implementation. While perceptions typically remain good, these areas suggest emerging concerns on the part of teachers.

4. School leadership may wish to explore the achievement trends suggested by cohort analyses of minority and non-minority ITBS test performance. Overall, cohort trends indicated that after growth in the first grade, second graders tended to perform substantially below their first grade performance. Secondly, leadership should note the ITBS performance of minority students and their standing relative to non-minority students.

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APPENDIX A

Faxon Montessori
Extended Day Program
Goals, Objectives, and Activities

Extended Day Report-Faxon Montessori School

PROGRAM

Social and Academic Development

GOAL: To reinforce the Montessori Method in the following areas: self-education, autonomous learning, independence, attention and concentration, manipulation of equipment, and practical life experiences.

OBJECTIVES

1. Children will be able to choose activities independently.
2. Children will be able to work together in small and large groups.
3. Children will be able to work on projects and activities without disturbing others working around them.
4. Children will put away their activities when they have finished with them.
5. Children will be able to tidy up their work areas without adult direction.

ACTIVITIES

Organized Games
Viewing and discussing videos and filmstrips
Cooking
Painting
Group Stories
Woodworking

PROGRAM

Enrichment

GOAL: To reinforce the Montessori Method in the areas of Life Science, Geography, Creative Expression, Computers, Music, and Art using appropriate instructional techniques to supplement the activities in the regular classroom.

OBJECTIVES

1. Children will be able to identify various life forms and discuss ways that they interact in our environment.
2. Children will be able to complete maps showing water and land forms, continents, life in various bio-regions, and regions of climate.
3. Children will be able to express themselves in short plays, stories they write, and art they create.
4. Children will use computers to develop computer literacy and learn typing skills.
5. Children will learn to identify two musical composers by ear.
6. Children will learn to sing 5 notes on pitch.

ACTIVITIES

Map and Globe activities
Computer activities
Creative writing groups
Science demonstrations and discussions
Science projects
Audio and Video tapes
Music appreciation activities
Music matching activities

PROGRAM

Tutoring

GOAL: To reinforce the Montessori Method in the areas of Math and Reading using appropriate instructional techniques to correct deficits in learning.

OBJECTIVES

1. Children will be able to complete needed additional activities for mathematics that were identified by the teacher.
2. Children will be able to complete needed additional activities for reading that were identified by the teacher.
3. Children will know the math facts appropriate for their age.

ACTIVITIES

Homework
Developmental learning experiences
Worksheets
Audio and Video tapes